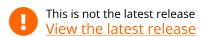


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Work-Related Training and Adult Learning, Australia methodology

Reference period 2016-17 financial year

Released 20/12/2017

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Explanatory notes

Introduction

1 This publication contains results from the Survey of Work-Related Training and Adult Learning (WRTAL), a topic of the Multipurpose Household Survey (MPHS) conducted throughout Australia from July 2016 to June 2017. The MPHS, undertaken each financial year by the Australian Bureau of Statistics (ABS), is a supplement to the monthly Labour Force Survey (LFS) and is designed to collect statistics for a number of small, self-contained topics. In 2016-17, the topics were:

- Work-Related Training and Adult Learning
- Household Use of Information Technology
- Patient Experiences in Australia
- Barriers and Incentives to Labour Force Participation
- Retirement and Retirement Intentions
- Crime Victimisation
- Income (Personal, Partner's, Household)

2 The WRTAL survey collected information about the level of participation of Australia's population in formal and non-formal learning, with a particular focus on work-related training and personal interest learning. Information available from the survey includes participation rates in non-formal learning, the reasons for participation, the time spent, personal costs incurred and also data on the barriers that prevent some people from undertaking training. Information on labour force characteristics, education, income and other demographics was also collected.

3 The WRTAL survey was previously conducted in April 2013 as a supplement to the monthly LFS. Further details are outlined below in the Data Comparability section.

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Scope and coverage

4 The scope of the WRTAL survey was restricted to persons aged 15-74 years who were usual residents of private dwellings excluding:

- members of the Australian permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from the Census of Population and Housing and estimated resident population counts
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants)
- persons living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, nursing homes, homes for people with disabilities, and prisons
- persons resident in the Indigenous Community Strata (ICS).

5 The scope for MPHS included households residing in urban, rural, remote and very remote parts of Australia, except the ICS.

6 In the LFS, rules are applied which aim to ensure that each person in coverage is associated with only one dwelling, and hence has only one chance of selection in the survey. See <u>Labour Force, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0)</u> (cat. no. 6202.0) for more detail.

Data collection

7 Each month, one eighth of the dwellings in the LFS sample were rotated out of the survey. These dwellings were selected for the MPHS. In these dwellings, after the LFS had been fully completed for each person in scope and coverage, a usual resident aged 15 years or over was selected at random (based on a computer algorithm) and ask the additional MPHS questions in a personal interview. The publication Labour Force, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0) (cat. no. 6202.0) contains information about survey and sample design, scope, coverage and population benchmarks relevant to the monthly LFS, and consequently the MPHS. This publication also contains definitions of demographic and labour force characteristics, and information about telephone interviewing.

8 In the MPHS, if the randomly selected person was aged 15 to 17 years, permission was sought from a parent or guardian before conducting the interview. If permission was not given, the parent or guardian was asked the questions on behalf of the 15 to 17 year old (proxy interview).

9 Data were collected using Computer Assisted Interviewing (CAI), whereby responses were recorded directly onto an electronic questionnaire in a notebook computer, with interviews conducted either face-to-face or over the telephone. The majority of interviews were conducted over the telephone.

Sample size

10 After taking into account sample loss, the response rate for the Survey of Work-Related Training and Adult Learning was 72.1%. In total, information was collected from 28,207 fully responding persons. Of these, 25,411 persons were within the scope of the WRTAL topic, that is, those people aged 15 to 74 years. This includes 463 proxy interviews with people aged 15 to 17 years, where permission was not given by a parent or guardian for a personal interview.

11 All respondents who reported being permanently unable to work and those aged 65-74 years who were permanently not intending to work, were not asked questions about participation in work-related training. These

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people were all classified as having not participated. There were an estimated 1.4 million persons in Australia that made up these two groups, comprising around 330,000 people who are permanently unable to work and 1.1 million people aged 65-74 years who were permanently not intending to work. Note that information regarding participation in personal interest learning and formal learning was collected for these respondents.

Weighting, benchmarks and estimation

Weighting

12 Weighting is the process of adjusting results from a sample survey to infer results for the total 'in-scope' population. To do this, a 'weight' is allocated to each enumerated person. The weight is a value which indicates how many persons in the population are represented by the sample person.

13 The first step in calculating weights for each unit is to assign an initial weight, which is the inverse of the probability of the unit being selected in the survey. For example, if the probability of a person being selected in the survey was 1 in 600, then the person would have an initial weight of 600 (that is, they represent 600 people).

Benchmarks

14 The initial weights are calibrated to align with independent estimates of the population, referred to as benchmarks. The population included in the benchmarks is the survey scope.

This calibration process ensures that the weighted data conform to the independently estimated distribution of the population rather than the distribution within the sample itself.

Calibration to population benchmarks helps to compensate for over or under-enumeration of particular categories of persons which may occur due to either the random nature of sampling or non-response.

15 The survey was benchmarked to the Estimated Resident Population (ERP) aged 15-74 years living in private dwellings in each state and territory, at December 2016. People living in Indigenous communities were excluded. These benchmarks are based on the 2011 Census of Population and Housing.

16 While LFS benchmarks are revised every 5 years, to take into account the outcome of the 5-yearly rebasing of the ERP following the Census, the supplementary surveys and MPHS (from which the statistics in this publication are taken) are not. Small differences will therefore exist between the civilian population aged 15 years and over reflected in the LFS and other labour household surveys estimates, as well as over time.

Estimation

17 Survey estimates of counts of persons are obtained by summing the weights of persons with the characteristics of interest.

Confidentiality

18 To minimise the risk of identifying individuals in aggregate statistics, a technique is used to randomly adjust cell values. This technique is called perturbation. Perturbation involves a small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics. After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals. The introduction of perturbation in publications ensures that these statistics are consistent with statistics released via services such as TableBuilder.

19 Perturbation has been applied to the 2016-17 WRTAL data. Data from the 2013 WRTAL survey have not been perturbed.

Reliability of estimates

20 All sample surveys are subject to error which can be broadly categorised as either: sampling error or nonsampling error. For more information refer to the Technical Note.

21 Sampling error is the difference between the published estimate, derived from a sample of dwellings, and the value that would have been produced if all dwellings in scope of the survey had been included.

22 Non-sampling error may occur in any collection, whether it is based on a sample or a full count of the population such as a census. Sources of non-sampling error include: non-response; errors in reporting by respondents or recording of answers by interviewers; and errors in coding and processing data. Every effort was made to reduce the non-sampling error by: careful design and testing of the questionnaire; training and supervision of interviewers; follow-up of respondents; and extensive editing and quality control procedures at all stages of data processing.

Data quality

23 Information recorded in this survey is 'as reported' by respondents, and may differ from that which might be obtained from other sources or via other methodologies. In addition, the labour force characteristics collected in the survey, such as employment status, industry and occupation, relate to the week before the survey interview and therefore may not reflect the respondent's actual labour force status at the time they participated in the training. This factor should be considered when interpreting some of the estimates in this publication. However, most tables with labour force characteristics, have been restricted to those employed persons who undertook their training as part of their current main job.

24 A small proportion of respondents were resident in areas with no Socio-Economic Indexes for Areas (SEIFA) scor allocated. For the purposes of the Survey of Work-Related Training and Adult Learning, these records have had a SEIFA decile imputed, based on the deciles of the surrounding areas. For information on SEIFA, see the Socio-Economic Indexes for Areas (SEIFA) section below.

Data comparability

Comparability with the 2013 Work-Related Training and Adult Learning Survey

25 The WRTAL survey was previously conducted in April 2013 as a supplement to the monthly LFS. Both survey vehicles use similar collection methodologies, i.e. both were primarily personal telephone interviews, conducted after the LFS, with one randomly selected person from the household. The questions were the same for both surveys.

26 The key difference between the 2013 and 2016-17 surveys relates to the length of enumeration time during which the data was collected. The 2013 WRTAL collected data during a one month period while the MPHS enumeration occurred over 12 months. This means that for the 2013 WRTAL, the reference period '...in the last 12 months' relates to learning undertaken in the same 12 month period (May 2012 to April 2013). However, for the 2016-17 MPHS, '...in the last 12 months' depends on which month the respondent was interviewed. For example, if a person was interviewed in July 2016, '...in the last 12 months' would refer to the period August 2015 to July 2016. If a person was interviewed in June 2017, '...in the last 12 months' would refer to the period July 2016 to June 2017. The difference in reference period is not expected to impact on the comparability of the data.

27 While there were no changes to wording for the work-related training and adult learning specific questions, the LFS survey questionnaire underwent a number changes in July 2014. For further information see Information Paper: Questionnaire Used in the Labour Force Survey, July 2014 (https://abs.gov.au/research/labour/questionnaires-usedlabour-force-survey) (cat. no. 6232.0).

28 In 2013, a total of 19,976 people aged 15-74 years provided data for the WRTAL survey. Generally, increasing the sample size will reduce the error, allowing for more detailed data analysis. The increase in responding sample to 25,411 people should improve the reliability of the estimates for many of the data items.

Comparability with the Survey of Education and Training

29 Many of the data items included in the WRTAL survey are similar to those collected in the Survey of Education and Training (SET), (please refer to Education and Training Experience (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6278.0) (cat. no. 6278.0). When comparing results from these collections, there are a number of differences in the collection methodology which impact on the final participation rates. These changes include mode effect, context effect, question wording and changes to the in-scope population.

30 Mode effect refers to the impact of the survey delivery method on the responses to the survey. The SET was part of the Special Social Survey program which collected responses using a face-to-face interview with each person in the selected households. In particular, respondents were provided with prompt cards enabling them to read and then select the response categories for various questions. By comparison, the WRTAL survey was collected predominantly as a telephone interview with one randomly selected person in each household. As a telephone survey, prompt cards could not be used. Respondent recall bias is also likely to have more impact in telephone interviews than face-to-face interviewing, and may explain part of the difference in participation rates between 2005 and 2013 noted in the publication.

31 Context effects occur when the preceding questions influence responses to subsequent questions or when the order in which the questions are asked affects the correlation between the target and the context questions. The WRTAL survey focused on work-related training and therefore the majority of questions were framed around participation in this form of learning. SET was a large survey which focused mainly on participation in formal learning, with the questions about non-formal learning following the modules about formal learning. It is possible that the context effects may contribute to the differences in reporting of participation in work-related training.

32 Due to the change in mode of collection between SET and the WRTAL survey it was necessary for a number of the questions to be redesigned. In particular, questions about participation in work-related training were asked directly in the WRTAL survey, whereas in SET, participation in work-related training was derived from particular responses to questions relating to the reasons for undertaking all non-formal training.

33 The in-scope population for the WRTAL survey and SET were slightly different which may have contributed to differences in estimated participation rates for learning activities. While the in-scope population for the WRTAL survey included all people aged 15-74 years, the in-scope population for the latest iteration of SET was people aged 15-64 years and people aged 65-74 years who were in or marginally attached to the labour force.

34 Finally, due to the limited enumeration time available for supplementary surveys and the MPHS compared to Special Social Surveys, the WRTAL survey only collected information about the most recent work-related training and personal interest learning course for each respondent. SET, however, collected information on up to four most recent courses (either work-related training or personal interest learning) for each person in the household. This allowed for additional data to be presented in the SET publication at the specific course level that is not available in the WRTAL publications.

Comparability to monthly LFS statistics

35 Since the WRTAL survey is conducted as a supplement to the LFS, data items collected in the LFS are also available in this publication. However, there are some important differences between the two surveys. The LFS had a response

rate of over 90% compared to the MPHS response rate of 72.1%. The scope of the WRTAL survey and the LFS (refer to the Scope and Coverage section above) also differ. Due to the differences between the samples, data from the WRTAL survey and the LFS are weighted separately. Differences may therefore be found in the estimates for those data items collected in the LFS and published as part of the WRTAL survey.

Comparability with other ABS education surveys

36 Estimates from the WRTAL survey may differ from the estimates for the same or similar data items produced from other ABS collections for several reasons. For example, all sample surveys are subject to different sampling errors so users should take account of the relative standard errors (RSEs) and margins of error (MOEs) on estimates where comparisons are made. Differences may also exist in scope and/or coverage, reference periods reflecting seasonal variations, non-seasonal events that may have impacted on one period but not another, or because of underlying trends in the phenomena being measured.

37 The survey of Education and Work, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/6227.0) (SEW) (cat. no. 6227.0) has some similarities with the WRTAL survey. Conducted annually, SEW provides a range of indicators about educational participation and attainment, and data on people's transition between education and work. Comparison of SEW and WRTAL data should be undertaken with caution due to different collection methodologies, scope and sample size. SEW is based on a household interview with any responsible adult who responds on behalf of all persons aged 15-74 years in the household. Whereas WRTAL is conducted as a personal interview with one randomly selected person aged 15-74 years in the household.

Classifications

Geography

38 Australian geographic data are classified according to the <u>Australian Statistical Geography Standard (ASGS)</u>:

Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/9593E06A9325683BCA257FED001561EA?opendocument)_ (cat. no. 1270.0.55.001

Remoteness areas are classified according to the <u>Australian Statistical Geography Standard (ASGS)</u>: Volume 5
Remoteness Structure, July 2011 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/

Lookup/1270.0.55.005Main+Features1July%202011?OpenDocument)_ (cat. no. 1270.0.55.005)

Country of birth

39 Country of birth data are classified according to the <u>Standard Australian Classification of Countries (SACC),2016</u> (https://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue/5D2485E6F15281E6CA2570B5007ACA80? <u>OpenDocument</u>) (cat. no. 1269.0).

Industry

40 Industry data are classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 2.0) (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/1292.0?

OpenDocument) (cat. no. 1292.0).

Occupation

41 Occupation data are classified according to the <u>Australian and New Zealand Standard Classifications of Occupations</u>, 2013, Version 1.2 (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/1220.0? <u>OpenDocument</u>) (cat. no. 1220.0).

Education

42 Education data are classified according to the Australian Standard Classification of Education (ASCED), 2001

(https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

43 Level of Education is defined as a function of the quality and quantity of learning involved in an educational activity. There are nine broad levels, 15 narrow levels and 64 detailed levels. For definitions of these levels see the Australian Standard Classification of Education (ASCED), 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0).

44 Field of Education is defined as the subject matter of an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purpose for which the education is undertaken, and through the theoretical content which underpins the subject matter. There are 12 broad fields, 71 narrow fields and 356 detailed fields. For definitions of these fields see the <u>Australian Standard Classification of Education (ASCED)</u>, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0).

Level of highest educational attainment

45 Level of highest educational attainment was derived from information on highest year of school completed and level of highest non-school qualification. The derivation process determines which of the 'non-school' or 'school' attainments will be regarded as the highest. Usually the higher ranking attainment is self-evident, but in some cases some secondary education is regarded, for the purposes of obtaining a single measure, as higher than some certificate level attainments.

46 The following decision table is used to determine which of the responses to questions on highest year of school completed (coded to ASCED Broad Level 6) and level of highest non-school qualification (coded to ASCED Broad Level 5) is regarded as the highest. This table has been modified since the 2013 SEW. Note that this table was designed for the purpose of obtaining a single value for level of highest educational attainment and is not intended to convey an other hierarchy.

Decision table: Level of highest educational attainment

	Level of highest non-school qualification							
Highest year of school completed	Inadequately described / L.n.d.	Cert n.f.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Cert I & II n.f.d.	Cert II	Cert I N.S
Sec. Education n.f.d	L.n.d.	L.n.d.	Cert III & IV n.f.d.	Cert IV	Cert III	L.n.d.	L.n.d.	L.n.d.N.S.
Senior Sec. Education n.f.d	L.n.d.	L.n.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Senior Sec. n.f.d.	Senior Sec. n.f.d.	Senior Sec. n.f.d.
Year 12	L.n.d.	L.n.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Year 12	Year 12	Year 12N.S.
Year 11	L.n.d.	L.n.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Year 11	Year 11	Year 11N.S.
Junior Sec. Education n.f.d	L.n.d.	L.n.d.	Cert III & IV n.f.d.	Cert IV	Cert III	L.n.d.	L.n.d.	L.n.d.N.S.
Year 10	L.n.d.	L.n.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Year 10	Year 10	Year 10N.S.
Year 9 and below	L.n.d.	Cert n.f.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Cert I & II n.f.d.	Cert II	Cert IN.S.
Never attended school	L.n.d.	Cert n.f.d.	Cert III & IV n.f.d.	Cert IV	Cert III	Cert I & II n.f.d.	Cert II	Cert IN.S.
N.S.	N.S.	N.S.	Cert III & IV n.f.d.	Cert IV	Cert III	N.S.	N.S.	N.S.N.S.

Cert = Certificate

L.n.d. = Level not determined

n.f.d. = not further defined

N.S. = Not Stated

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47 The decision table is also used to rank the information provided in a survey about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose highest year of school completed was Year 12, and whose level of highest non-school qualification was a Certificate III, would have those responses crosschecked on the decision table and would as a result have their level of highest educational attainment recorded as Certificate III. However, if the same person answered 'certificate' to the highest non-school qualification question, without any further detail, it would be crosschecked against Year 12 on the decision table as Level not determined. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other. For further details, see Education Variables (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/1246.0?OpenDocument) (cat. no. 1246.0)

Socio-Economic Indexes for Areas (SEIFA)

48 SEIFA is a suite of four summary measures that have been created from 2011 Census information. Each index summarises a different aspect of the socio-economic conditions of people living in an area. The indexes provide more general measures of socio-economic status than is given by measures such as income or unemployment alone.

49 Each index ranks geographic areas across Australia in terms of their relative socio-economic advantage and disadvantage. The four indexes each summarise a slightly different aspect of the socio-economic conditions in an area. It is important to note that the indexes are assigned to areas and not to individuals. They indicate the collective socio-economic characteristics of the people living in an area. The respondents in the WRTAL survey have been assigned the 2011 Census SEIFA for the area in which they live. Consequently, they may not necessarily have the same personal characteristics that describes the socio-economic status of their geographic area as a whole.

50 The index used in the Work-Related Training and Adult Learning publication is the Index of Relative Socio-Economic Disadvantage (IRSD), derived from Census variables such as income, educational attainment, employment unemployment, occupation and some housing variables. The index ranks areas on a continuum from most disadvantaged to least disadvantaged. A low score on the index (i.e. lowest quintile or decile) indicates a high proportion of relatively disadvantaged people in an area. Such areas include many households with low income, people with no qualifications and many people in low skill occupations. It should be noted that it cannot be concluded that an area with a very high score has a large proportion of relatively advantaged ('well off') people, as there are no variables in the index to indicate this. It can only be concluded that such an area has a relatively low incidence of disadvantage.

51 The indexes and supporting material are found in the publication <u>Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia (https://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001)</u> (cat no 2033.0.55.001).

Products and services

52 A Data Cube (spreadsheet) containing all tables produced for this publication is available from the Data downloads section. The Data Cube presents tables of estimates and their corresponding Relative Standard Errors (RSEs) as well as proportions and their associated Margins of Error (MOEs).

53 For users who wish to undertake more detailed analysis of the data, the survey microdata will be released through the TableBuilder product. For further details, refer to Microdata: Work-Related Training and Adult Learning (https://www.abs.gov.au/ausstats/abs@.nsf/mf/4234.0.30.001) (cat. no. 4234.0.30.001).

54 Special tabulations are available on request. Subject to confidentiality and sampling variability constraints,

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tabulations can be produced from the survey incorporating data items, populations and geographic areas selected to meet individual requirements. These can be provided in printed or electronic form. A list of data items which can be tabulated from the 2016-17 WRTAL survey is available from the Data downloads section in this publication. All enquiries should be made to the National Information and Referral Service on 1300 135 070.

55 For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070, or email client.services@abs.gov.au (mailto:client.services@abs.gov.au). The ABS Privacy Policy (https://www.abs.gov.au/privacy) outlines how the ABS will handle any personal information that you provide to us.

Acknowledgements

56 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

Next survey

57 The ABS expects to conduct this survey again in 2020-21.

Related publications

58 Current publications and other products released by the ABS are available from the ABS website. The ABS also issues a daily upcoming release advice on the websites that details products to be released in the week ahead.

Technical note - data quality

Reliability of the estimates

1 The estimates in this publication are based on information obtained from a sample of the Australian population. Although care has been taken to ensure the survey results are as accurate as possible, there are certain factors that can affect their reliability for which no adequate adjustments can be made. These factors, known as non-sampling error and sampling error, should be kept in mind when interpreting the results of this survey.

Non-sampling error

2 Non-sampling error may occur in any collection, whether it is based on a sample of the population or a full count such as a census. Sources of non-sampling error include non-response as well as errors in reporting by respondents, recording of answers by interviewers, coding and processing data. Every effort is made to reduce non-sampling error by careful design and testing of questionnaires, training and supervision of interviewers, and extensive editing and quality control procedures at all stages of data processing. It is not possible to quantify the non-sampling error.

Sampling error

3 Sampling error is the difference between the published estimates, derived from a sample of persons, and the value that would have been produced if the total population (as defined by the scope of the survey) had been included in the survey. The size of the sampling error depends on the following factors:

- Sample design the final design attempted to make the key survey results as representative as possible within cost and operational constraints
- Sample size the larger the sample on which the estimate is based, the smaller the associated sampling error
- Population variability the extent to which people differ on the particular characteristic being measured. This is referred to as the population variability of a particular characteristic. The smaller the population variability of a particular characteristic, the more likely it is that the population will be well represented by the sample, and,

therefore the smaller the sampling error. Conversely, the more variable the characteristic, the greater the sampling error.

Calculation of standard error

4 One measure of the sampling error is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of persons was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all persons had been surveyed, and about 19 chances in 20 (95%) that the difference will be less than two SEs. For estimates of population sizes, the size of the SE generally increases with the level of the estimate, so that the larger the estimate, the larger the SE. However, the larger the the sampling estimate that smaller the SE becomes in percentage terms. Therefore larger estimates will be relatively more stable than smaller estimates. See What is a Standard Error and Relative Standard Error, Reliability of estimates for Labour Force data (https://www.abs.gov.au/websitedbs/d3310114.nsf/Home/What+is+a+Standard+Error+and+Relative+Standard+Error, +Reliability+of+estimates+for+Labour+Force+data) for more details.

5 Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate to which it is related. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling and thus avoids the need to refer also to the size of the estimate.

$$RSE\% = \left(\frac{SE}{\text{estimate}}\right) \times 100$$

6 Only estimates (numbers or percentages) with RSEs less than 25% are considered sufficiently reliable for most analytical purposes. However, estimates with larger RSEs have been included. Estimates with an RSE in the range 25% to 50% should be used with caution while estimates with RSEs greater than 50% are considered too unreliable for general use. The Excel spreadsheets in the Data downloads section contain all the tables produced for this release and the calculated RSEs for each of the estimates.

7 All cells in the Excel spreadsheets with RSEs greater than 25% contain a comment indicating the size of the RSE. These cells can be identified by a red indicator in the corner of the cell. The comment appears when the mouse pointer hovers over the cell.

Calculation of margin of error

8 Another useful measure is the Margin of Error (MOE), which shows the largest possible difference that could be between the estimate due to sampling error and what would have been produced had all persons been included in the survey with a given level of confidence. It is useful for understanding and comparing the accuracy of proportion estimates. Confidence levels typically used are 90%, 95% and 99%. Where provided, MOEs for estimates in this publication are calculated at the 95% confidence level. At the 95% confidence level the MOE indicates that there are about 19 chances in 20 that the estimate will differ by less than the specified MOE from the population value (the figure obtained if all dwellings had been enumerated). The 95% MOE is obtained by multiplying the SE by 1.96.

9 The 95% MOE can also be calculated from the RSE by:

$$MOE(y) pprox rac{RSE(y) imes y}{100} imes 1.96$$

10 This can easily be converted to a 90% confidence level by multiplying the MOE by:

$$\frac{1.645}{1.96}$$

or to a 99% confidence level by multiplying by a factor of:

11 A confidence interval expresses the sampling error as a range in which the population value is expected to lie at a given level of confidence. The confidence interval can easily be constructed from the MOE of the same level of confidence by taking the estimate plus or minus the MOE of the estimate.

12 Estimates of proportions with an MOE more than 10% are annotated to indicate they are subject to high sample variability and particular consideration should be given to the MOE when using these estimates. Depending on how the estimate is to be used, an MOE greater than 10% may be considered too large to inform decisions. In addition, estimates with a corresponding standard 95% confidence interval that includes 0% or 100% are annotated to indicate they are usually considered unreliable for most purposes.

13 The Excel spreadsheets in the Data downloads section contain all the tables produced for this release and the calculated MOEs for each of the proportions. All cells in the Excel spreadsheets with MOEs greater than 10% or where the 95% confidence interval includes 0% or 100% contain a comment regarding their reliability. These cells can be identified by a red indicator in the corner of the cell. The comment appears when the mouse pointer hovers over the cell.

Calculation of standard error for medians

14 This publication contains calculations of medians. The median value is the middle value of a set of values when the values are sorted in size order.

15 Standard errors can be calculated from the median and their corresponding RSE using the following formula:

$$SE~of~estimate = \left(rac{RSE}{100}
ight) imes estimate$$

Standard error of a difference

16 The difference between two survey estimates (counts or percentages) can also be calculated from published estimates. Such an estimate is also subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y)pprox \sqrt{\left[SE(x)
ight]^2+\left[SE(y)
ight]^2}$$

17 While this formula will only be exact for differences between separate and uncorrelated characteristics or sub populations, it provides a good approximation for the differences likely to be of interest in this publication

Significance testing on differences between survey estimates

18 When comparing estimates between surveys or between populations within a survey, it is useful to determine whether apparent differences are 'real' differences between corresponding population characteristics or simply the product of differences between survey samples. One way to examine this is to determine whether the difference between the estimates is statistically significant. A statistical significance test for a comparison between estimates can be performed to determine whether it is likely that there is a difference between the corresponding population characteristics. The SE of the difference between two corresponding estimates (x and y) can be calculated using the formula shown above in the standard error of a difference section (paragraph 16). This SE is then used to calculate the following test statistic:

$$\left(\frac{x-y}{SE(x-y)}\right)$$

19 If the value of this test statistic is greater than 1.96 then there is evidence, with a 95% level of confidence, of a statistically significant difference in the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations with respect to that characteristic.

Glossary

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Australian Qualifications Framework (AQF)

The Australian Qualifications Framework (AQF) is the national policy for regulated qualifications in Australian education and training. It incorporates the qualifications from each education and training sector into a single comprehensive national qualifications framework. It was first introduced in 1995.

Certificate n.f.d. (Certificate not further defined)

Survey responses are coded to Certificate not further defined (n.f.d.) when there is not enough information to code them to Certificate I, II, III or IV in the Australian Standard Classification of Education (ASCED), 2001 (https:// www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0). Level of education classification.

Classroom instruction

Method for delivering work-related training which generally involves a teacher, lecturer or presenter; includes but not limited to seminars, lecturers, hands-on work or practical exercises, group exercises and laboratory work.

Completed (schooling)

For schooling up to and including Year 11, the term 'completed' means attendance of a full year of school enabling the student to progress to the next year of school.

Completed (qualification)

For qualifications (including Year 12 certificate and non-school qualifications) 'completed' refers to successfully passing the required assessment(s) or examination(s) to gain an educational qualification.

Consultant

A consultant refers to a person or organisation hired or contracted by an employer to deliver a work-related training course.

Contact activities

Contact activities include direct contact with a teacher or instructor.

Country of birth

Country of birth has been classified according to the Standard Australian Classification of Countries (SACC), 2016 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue/5D2485E6F15281E6CA2570B5007ACA80? OpenDocument) (cat. no. 1269.0).

Current main job

The job which a person was employed in during the survey reference week. In cases where the person was employed in more than one job, the current main job refers to the job in which the person usually works the most hours. However, a person may have undertaken their most recent work-related training in a previous job. Therefore several tables presented in this publication relating to work-related training are presented only for people who have undertaken training as part of their current main job.

Employed

Persons who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers)
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers)
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week
 - away from work as a standard work or shift arrangement
 - on strike or locked out
 - on workers' compensation and expected to return to their job, or
- were employers or own account workers who had a job, business or farm, but were not at work.

Employed full-time

Employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Employed part-time

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Employee

A person who works for an employer and is paid in the form of wages or salaries, commission, commission with a retainer, piece rates or payment in kind.

External training provider

For the purpose of this survey an external training provider is defined as a person or organisation who deliver work-related training and are not classified as either an existing staff member or a consultant hired by the organisation to deliver the training.

Field not determined

Field not determined includes inadequately described responses or where no responses were given.

Field of education

Field of education is defined as the subject matter of an educational activity. It is categorised according to the <u>Australian Standard Classification of Education (ASCED), 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0)</u> (cat. no. 1272.0) field of education classification. This publication presents the main field of education studied.

Formal learning

Formal learning activities lead to a qualification recognised by the Australian Qualifications Framework (AQF) such as a Degree, Diploma or Certificate and also includes study at school. Formal learning is provided in the systems of schools, colleges, universities and other institutions or organisations and is usually associated with a providing body responsible for determining the teaching method and/or curriculum, admission requirements.

Income

Gross current usual (weekly equivalent) cash receipts that are of a regular and recurring nature, and accrue to individual household members at annual or more frequent intervals, from employment, own business, the lending of assets and transfers from Government, private organisations and other households.

Index of Relative Socio-Economic Disadvantage

This is one of four Socio-Economic Indexes for Areas (SEIFAs) compiled by the ABS following each Census of Population and Housing, from various characteristics of persons resident in particular areas. The Index of Relative Socio-Economic Disadvantage (IRSD) summaries attributes such as income, educational attainment, unemployment and occupation skill levels. The index refers to the area (the Statistical Area Level 1) in which a person lives, not to the socio-economic situation of the particular individual. The index ranks areas on a continuum from most disadvantaged to least disadvantaged. A low score on the index (i.e. lowest quintile or decile) indicates a high proportion of relatively disadvantaged people in an area. Such areas include many households with low income, people with no qualifications and many people in low skill occupations. It should be noted that it cannot be concluded that an area with a very high score has a large proportion of relatively advantaged ('well off') people, as there are no variables in the index to indicate this. It can only be concluded that such an area has a relatively low incidence of disadvantage. The indexes used in this publication were those compiled following the 2011 Census. For further information about the indexes, see Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA) (https://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001) (cat. no. 2033.0.55.001).

Industry

Industry data is classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC). 2006 (Revision 2.0) (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (cat. no. 1292.0).

Level of highest non-school qualification

A person's level of highest non-school qualification is the highest qualification a person has attained in any area of formal study other than school study. It is categorised according to the Australian Standard Classification of Education (ASCED), 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0) Level of education classification.

Level not determined

Level not determined includes inadequately described responses or where no responses were given.

Non-contact activities

Activities that do not involve contact with a teacher or instructor, for example undertaking research or completing assignments.

Non-formal learning

Non-formal learning activities are structured training or courses that do not form part of an award or qualification (e.g. Degree or Certificate) recognised by the Australian Qualification Framework (AQF).

Non-school qualification

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include qualifications at the Postgraduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

Not in labour force

Persons who were not in the categories 'employed' or 'unemployed'.

Occupation

Occupation data are classified according to the Australian and New Zealand Standard Classifications of Occupations, 2013, Version 1.2 (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/1220.0?OpenDocument) (cat. no. 1220.0)

On-line instruction

Method for delivering work-related training; includes but not limited to self paced learning and training undertaken via the internet and lectures delivered by a teacher/instructor over the internet.

Organised learning

Consists of both formal and non-formal learning.

Own business

A person who works in their own incorporated or unincorporated business with or without employees. Own business also includes contractors and subcontractors, and people contributing to a family business.

Personal costs

Includes any cost related to the course which were paid for by the participant and not reimbursed by a third party, for example course fees or costs for study materials.

Personal interest learning

Structured non-formal learning courses that do not lead to a qualification, undertaken for reasons not related to work.

Qualification

Formal certification, issued by a relevant approved body, in recognition that a person has achieved an appropriate level of learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at a particular level are excluded.

Quintile (Index of Relative Socio-Economic Disadvantage)

The distribution of the Index of Relative Socio-Economic Disadvantage (IRSD) scores are divided into five equal sized groups referred to as quintiles. The lowest scoring 20% of areas are given a quintile number of 1, the second-lowest 20% of areas are given a quintile number of 2 and so on, up to the highest 20% of areas which are given a quintile number of 5.

Reference week

The week preceding the week in which the interview was conducted.

Remoteness area

The <u>Australian Standard Geographical Standard (ASGS)</u>: Volume 5 - Remoteness Structure, July 2011 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005) (cat. no.1270.0.55.005) is used by the ABS for the dissemination of a broad range of social and demographic statistics. The classification divides Australia into six broad regions (called remoteness areas), on the basis of their relative access to service.

School study

School study is participation in primary or secondary level education, regardless of the institution or location where

the study is or was undertaken. It therefore includes such study undertaken in a Technical and Further Education (TAFE) or other institution. For the purpose of this publication school study is classified as participation in formal learning.

SEIFA

See Index of Relative Socio-Economic Disadvantage

Size of business

A measure of the size of business in terms of the number of employees within that business. The business size is measured as the number of employees at the physical location where the employer works as well as the size of the business Australia-wide.

Working hours

Refers to the time when a person would usually be working.

Work-related training

Non-formal learning undertaken to obtain, maintain or improve employment related skills and/or to improve employment opportunities. Work-related training courses have a structured format but do not lead to a qualification.

Unemployed

Persons who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week, or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Quality declaration

Institutional environment

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment (https://www.abs.gov.au/websitedbs/ d3310114.nsf/4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae00197b65!OpenDocument).

Relevance

Data on Work-Related Training and Adult Learning (WRTAL) were collected as part of the 2016-17 Multipurpose Household Survey (MPHS). Respondents were asked questions about their formal and non-formal learning activities with a particular focus on work-related training. The type of information collected included the reasons for participation, the personal cost of non-formal learning, and the time spent on the most recent work-related training course. Also collected was information on the barriers that prevented respondents from undertaking non-formal training.

In the MPHS, information is collected from one person selected at random in each selected household. The MPHS is a supplement to the monthly Labour Force Survey (LFS) and is designed to collect annual statistics on a small

number of self-contained topics. The scope of the LFS is restricted to people aged 15 years and over and excludes members of the permanent defence forces; certain diplomatic personnel of overseas governments usually excluded from Census and estimated resident populations; overseas residents in Australia; and members of non-Australian defence forces (and their dependants). Refer to Labour Force, Australia (https://www.abs.gov.au/ausstats/abs@.nsf/ mf/6202.0) (cat. no. 6202.0) for further information regarding the LFS. In addition, the 2016–17 MPHS excluded persons living in Indigenous communities and persons living in non-private dwellings such as hotels, university residences, students at boarding schools, patients in hospitals, inmates of prisons and residents of other institutions (e.g. retirement homes, homes for persons with disabilities). For the WRTAL survey, the scope is persons aged 15 to 74 years. For further information about the scope of WRTAL, please refer to the Explanatory Notes.

Information from WRTAL will be used by a wide range of public and private sector agencies, in particular the Department of Education and Training, Department of Employment and state government departments with responsibilities for education and training. Data about work-related training is of particular importance as it is not collected elsewhere through administration sources.

Timeliness

The WRTAL survey was enumerated during the period from July 2016 to June 2017. As the survey reference period was the 12 months prior to the survey interview, the data relates to training and learning occurring at some time between July 2015 and June 2017. Data are released approximately six months after the end of enumeration.

Accuracy

The WRTAL survey was designed to provide reliable estimates at the national level and for each state and territory. The number of completed interviews (after taking into account scope and coverage exclusions) was 19,976. The survey had a 72.1% response rate. The survey weighting ensured the responding population was representative of the estimated distribution of the population.

Two types of error are possible in an estimate based on a sample survey: non-sampling error and sampling error. Non-sampling error arises from inaccuracies in collecting, recording and processing the data. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures. Non-sampling error also arises because information cannot be obtained from all persons selected in the survey.

Sampling error occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all dwellings in the survey is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included in the survey, and about 19 chances in 20 that the difference will be less than two SEs. Measures of the relative standard errors (RSE) of the estimates for this survey are included with this release.

Only estimates with RSEs less than 25% are considered sufficiently reliable for most purposes. Estimates with RSEs between 25% and 50% have been included and are annotated to indicate they are subject to high sample variability and should be used with caution. In addition, estimates with RSEs greater than 50% have also been included and annotated to indicate they are considered too unreliable for general use.

Another measure is the margin of error (MOE), which describes the distance from the population value of the estimate at a given confidence level, and is specified at a given level of confidence. Confidence levels typically used are 90%, 95% and 99%. For example, at the 95% confidence level the MOE indicates that there are about 19 chances in 20 that the estimate will differ by less than the specified MOE from the population value (the figure obtained if all dwellings had been enumerated). The MOEs in this publication are calculated at the 95% confidence level, and estimates of proportions with an MOE more than 10% are annotated to indicate they are subject to high sample variability. In addition, estimates with a corresponding standard 95% confidence interval that includes 0% or 100% are annotated to indicate they are usually considered unreliable for most purposes. For further information, please refer to the Technical Note.

Coherence

The WRTAL survey was previously conducted in April 2013 as a supplement to the monthly LFS. The change of survey vehicle from a supplementary survey in 2013, to the MPHS in 2016-17 does not appear to have affected data comparability, as similar collection methodology was used, i.e. both were primarily personal telephone interviews, conducted after the LFS, with one randomly selected person from the household. The questions were the same for both surveys.

Comparison of WRTAL data and other ABS surveys such as the Survey of Education and Work (see Education and Work, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/6227.0), (6227.0)), and the Labour Force Survey should be undertaken with caution due to their different scope and sample sizes. Data from the WRTAL survey should be compared with caution to data collected in the Survey of Education and Training (see Education and Training Experience (https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/6278.0) (cat. no. 6278.0)) due to different collection methodologies used. For further information about data comparability, please refer to the Explanatory Notes.

Interpretability

To aid in the interpretation of the data, detailed information on concepts, definitions, terminology and other technical aspects of the survey can be found in the relevant web pages included with this release.

Accessibility

All tables and associated RSEs and MOEs are available in Excel spreadsheets which can be accessed from the Data downloads section.

Additional tables may also be available on request. The Data downloads section also includes a document containing a complete list of the data items available. Note that detailed data can be subject to high RSEs and MOEs, which in some cases may result in data being confidentialised.

Data from this survey will also be accessible in the TableBuilder environment, enabling users to create their own customised output as required. For further details, refer to the Microdata Entry Page (https://www.abs.gov.au/ websitedbs/d3310114.nsf/home/microdata+entry+page) on the ABS website.

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070, or email client.services@abs.gov.au. The ABS Privacy Policy (https://www.abs.gov.au/privacy) outlines how the ABS will handle any personal information that you provide to us.

Abbreviations

C Feedback

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ABS	Australian Bureau of Statistics
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
AQF	Australian Qualifications Framework
ASCED	Australian Standard Classification of Education
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
CAI	computer assisted interviewing
ERP	Estimated Resident Population
IRSD	Index of Relative Socio-Economic Disadvantage
LFS	Labour Force Survey
L.n.d.	Level not determined
MOE	margin of error
MPHS	Multipurpose Household Survey
n.f.d	not further defined
N.S	Not stated Not stated
pts	points
RSE	relative standard error
SACC	Standard Australian Classification of Countries
SE	standard error
SEIFA	Socio-Economic Indexes for Areas
SET	Survey of Education and Training
TAFE	Technical and Further Education
WRTAL	Work-Related Training and Adult Learning